California Monthly Climate Summary
November 2014

Weather Highlights

November 2014 was a warm and below average precipitation month for California. According to the Western Region Climate Center's California Climate Tracker, the monthly average temperature was 50.9°F which is 2.8°F higher than the long-term average of 48.1°F. With a statewide average of 1.9 inches, precipitation in November was 67% of average. Regional plots of precipitation and temperature for the past month are included at the end of the document.

November started with mild temperatures and dry conditions. By the end of the first week, a storm system moved across the state dropping up to an inch of rain in some locations and snow in the Sierra Nevada. High pressure dominated week 2 with warm temperatures and no precipitation. Cooler weather and some precipitation moved in for week 3. The cool weather and precipitation continued into Thanksgiving week. The month closed out with some cold, arctic air moving into the northern part of the state while the south remained warm and dry.

Preliminary records, reported on the National Weather Service Record Event Report, show that statewide there were 82 temperature records tied or broken and 7 precipitation records set for the month. Of the 82 temperature records set, 44 were for new high maximum temperatures and 31 were for new high minimum temperatures. Records were set on 16 days of the month. Needles recorded its 30th dry November with records dating back to 1888. South Lake Tahoe set new daily maximum temperature records on November 9th, 11th, and 27th with readings of 69°F, 69°F, and 65°F respectively. The old records were 63°F, 62°F, and 61°F respectively set 1995 and 2013. Bishop recorded its warmest September through November with an average temperature of 60.3°F breaking the old record of 59.7°F set in 1949.

For the California Data Exchange Center's (CDEC) network of temperature gages used in this report, 160 stations recorded a minimum temperature below freezing in March while zero stations reached or exceeded 100°F at least once during the month. Statewide extremes from the CDEC network of temperature gages are shown below. Also shown are the monthly average extremes from the CIMIS network. A table of regional average minimum, mean, and maximum temperatures from the CDEC stations is also shown at the end of the summary.

Precipitation in November was below average across the state. For the CDEC precipitation gages for September 2014, the largest amount of precipitation recorded was at Gasquet Ranger Station in the North Coast region with 9.00 inches. This is only 64% of the average precipitation for this station the month. At the other end of the spectrum, 2 stations recorded no precipitation for the month. For the CIMIS network, Windsor in Sonoma County topped the precipitation charts with 3.74 inches for the month and 14 stations recorded no precipitation. Some CIMIS gages may show large precipitation totals if the gages are not covered during irrigation activities

so care should be given to review precipitation data used from this network. The 8-Station Index for northern California precipitation recorded 3.9 inches in November. On average, 6.3 inches of precipitation is recorded for the 8-Station index for the month. The San Joaquin 5-Station Index recorded 3.1 inches of precipitation for November. On average, 4.7 inches of precipitation is recorded for the 5-Station Index for the month.

CoCoRaHS Update

Water Year 2015 continues California's sixth year with CoCoRaHS – the Community Collaborative Rain, Hail and Snow Network. This group uses citizen volunteers to record rain, hail and snow data. The users enter the data online at the CoCoRaHS web site. The web site provides the opportunity to see spatial detail of rain and snow patterns. A map from November 13, 2014 is shown at the end of the document. As of the end of November, California has 1217 volunteers signed up spanning 55 of California's 58 counties. The counties without volunteers are Alpine, Colusa, and Modoc. The counties with the most volunteers are Sonoma and San Diego and with 107 and 104 volunteers respectively. For the month of November, 13,101 reports were recorded for California. The largest daily rain total for CoCoRaHS- CA in September was in Humboldt County where 4.38 inches was recorded on 11/22/2014. There were 13 reports of snowfall recorded during the month with the largest daily snowfall recorded in Placer County with 7 inches recorded on 11/29/2014. Two hail reports were submitted for the month from San Bernardino County and Riverside County on 11/21/2014. The largest stone size was 3/8 inch. To join CoCoRaHS or find more information, please visit http://www.cocorahs.org.

Snowpack and Water Supply Conditions

Water Year 2015 has begun. The Water Supply Index (WSI) for WY2014 for the Sacramento Basin and the San Joaquin Basin fell into the critical category. More information can be found at http://cdec.water.ca.gov/water_supply.html. A historical listing of water year categories for both basins can be found at http://cdec.water.ca.gov/cgi-progs/iodir/WSIHIST.

Drought Monitor and Seasonal Outlook

The maps for California for October 28, 2014 and November 25, 2014 are shown below. The Drought Monitor maps can be found on the National Drought Mitigation Center's (NDMC) website http://drought.unl.edu/dm/. These maps are largely a reflection of precipitation and soil moisture deficit estimates. As of the November 25th depiction, 55.08% of California is depicted in the D4 or exceptional drought category, 21.61% of California is depicted in the D3 or extreme drought category, and 14.73 of California is depicted in D2 or severe drought category, 5.3% of California is depicted in D1 or moderate drought, and 0.28% depicted in abnormally dry or D0. Maps are updated weekly.

The U.S. Seasonal Drought Outlook for December through February from NOAA depicts California in some improvement throughout most of the state with the possibility of drought removal in the extreme northwestern and southern part of the

state. This forecast is based primarily on climatology and forecast models. Maps and information can be found at http://www.cpc.noaa.gov/products/expert_assessment/seasonal_drought.html. Updates are provided twice per month.

For more information on water conditions in California, visit http://www.water.ca.gov/waterconditions/. A table showing end-of-November reservoir storage by hydrologic region is shown at the end of this document.

ENSO Conditions and Long-Range Outlooks

The El Niño/Southern Oscillation (ENSO) is currently in neutral conditions. Equatorial sea surface temperature anomalies for the tropical Pacific have been positive with values of 0.8°C in the Niño 3.4 at the end of November. The September through November 3-month running mean of the Ocean Niño Index (ONI) is 0.5. Five consecutive ONI values need to be above the 0.5 threshold need to be observed for classification as an El Niño event. Most forecast models have the tropical sea surface transitioning to El Niño conditions by the latter part of fall. More information can be found at the Climate Prediction Center's web site: http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/ Updates are posted weekly. The latest three month outlook (December through February) from NOAA indicates a higher probability for above normal temperatures for the State. For precipitation, a higher probability of above average conditions is forecast across the southern half of the state while equal chances of above or below conditions are forecast for the northern part of the state. Outlook plots and discussions can be fount at http://www.wrcc.dri.edu/longrang/. General weather information of interest can be found at http://www.noaawatch.gov/. For anomaly information please see http://www.wrcc.dri.edu/anom/cal_anom.html.

Agricultural Data

November 2014 saw harvests wrapping up and preparations continue for winter crop planting. Cotton was harvested while winter wheat emerged. Olives, persimmons walnut and navel orange harvests continued. Rangeland responded to the rainfall during the month, but more is needed for recovery. Supplemental feeding continued. Lambing began during the month. For further crop information see http://www.nass.usda.gov/index.asp.

Other Climate Summaries

California Climate Tracker (new product of Western Region Climate Center)
Golden Gate Weather Service Climate Summary
NOAA Monthly State of the Climate Report

Statewide Extremes (CDEC)

High Temperature – 97°F (Cahuilla, Colorado River Desert)
Low Temperature – 2°F (Barrel Springs, North Lahontan)
High Precipitation – 9.00 inches (Gasquet Ranger Station, North Coast)
Low Precipitation – 0 inches (2 stations)

Statewide Extremes (CIMIS)

High Average Maximum Temperature – 83.7 ^{0}F (UC Andrade, Imperial County)
Low Average Minimum Temperature – 23.5^{0}F (Buntingville, Lassen County)
High Precipitation – 3.74 inches (Windsor, Sonoma County)*
Low Precipitation – 0 inches (14 stations)
*Sometimes irrigation water from sprinklers gets counted as precipitation if the gage is not covered.

Statewide Mean Temperature Data by Hydrologic Region (degrees F)

Hydrologic Region	No. Stations	Minimum	Average	Maximum
North Coast	27	30.2	46.5	71.2
SF Bay	9	43.2	55.4	76.0
Central Coast	13	38.6	56.7	84.0
South Coast	49	40.8	59.0	86.9
Sacramento	80	28.2	46.4	73.5
San Joaquin	44	27.8	45.7	73.5
Tulare Lake	18	22.7	42.4	69.3
North Lahontan	27	15.5	38.4	64.1
South Lahontan	15	20.5	43.2	70.8
Colorado River Desert	7	42.0	63.6	90.3
Statewide Weighted Average	289	29.6	47.7	74.1

Statewide Precipitation Statistics

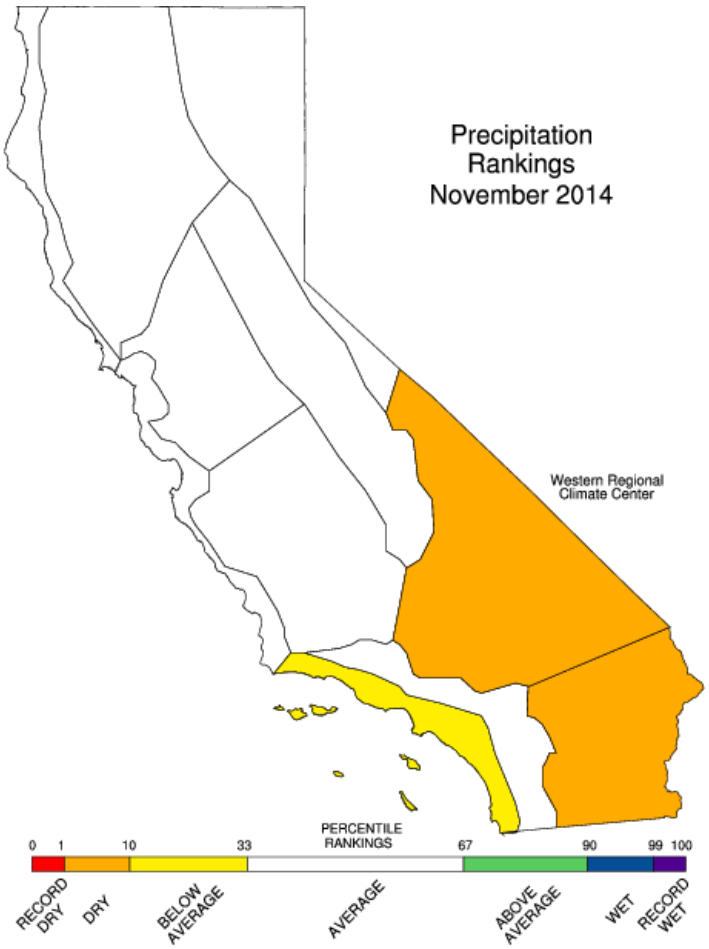
Hydrologic Region	Region Weight	Basin Reporting			Stations Reporting			% of Historic Average	
		Basins	Nov	Oct-Nov	Stations	Nov	Oct-Nov	Nov	Oct-Nov
North Coast	0.27	5	4	4	17	9	9	64.1%	101%
SF Bay	0.03	2	2	2	6	5	5	89.6%	83%
Central Coast	0.06	3	3	3	11	5	5	76.8%	69%
South Coast	0.06	3	3	3	14	12	12	31.6%	30%
Sacramento River	0.26	5	5	5	41	31	31	74.4%	73%
San Joaquin River	0.12	6	6	6	24	17	17	73.9%	60%
Tulare Lake	0.07	5	5	5	28	18	18	57.4%	47%
North Lahontan	0.04	3	3	3	13	11	11	60.0%	55%
South Lahontan	0.06	3	3	3	15	8	8	20.4%	15%
Colorado River	0.03	1	1	1	6	3	3	13.6%	10%
Statewide Weighted Average	1	36	35	35	176	119	119	62.8%	69%

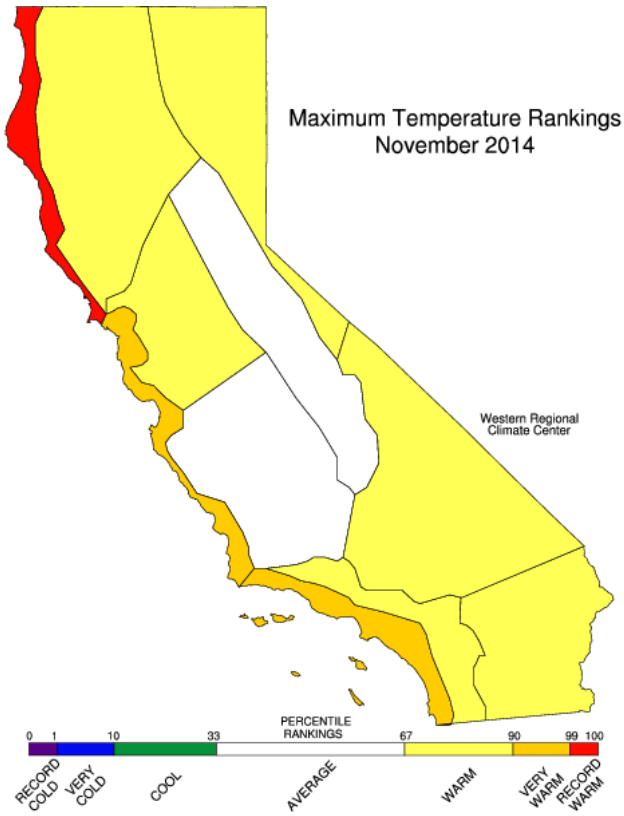
End-of-November Reservoir Storage by Hydrologic Region

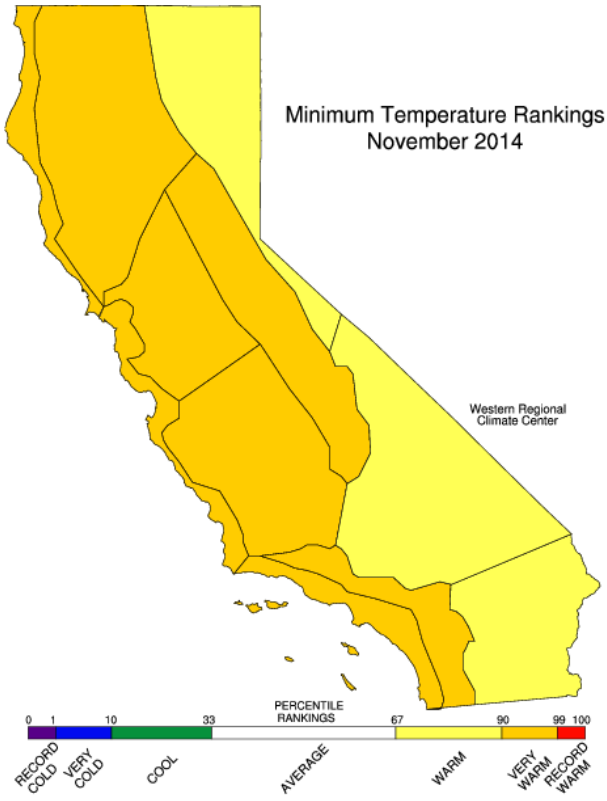
Storage in Thousand Acre-Feet (taf)

End-of-November Reservoir Storage	Number of Reservoirs	Average Storage (taf)	2014 Storage (taf)	% of Average
North Coast	6	1,892	774	41%
San Francisco Bay	17	399	371	93%
Central Coast	6	516	150	29%
South Coast	29	1,279	814	64%
Sacramento	43	9,478	5,569	59%
San Joaquin	34	6,276	3,406	54%
Tulare	6	647	251	39%
North Lahontan	5	459	74	16%
South Lahontan	8	267	205	77%
Total	154	21,217	11,618	55%

California Climate Tracker Images




Maximum Temperature Rankings
November 2014
Western Regional
Climate Center
PERCENTILE
RANKINGS
0 1 10 33 67 90 99 100
RECORD COLD
VERY COLD
COOL
AVERAGE
WARM
VERY WARM
RECORD WARM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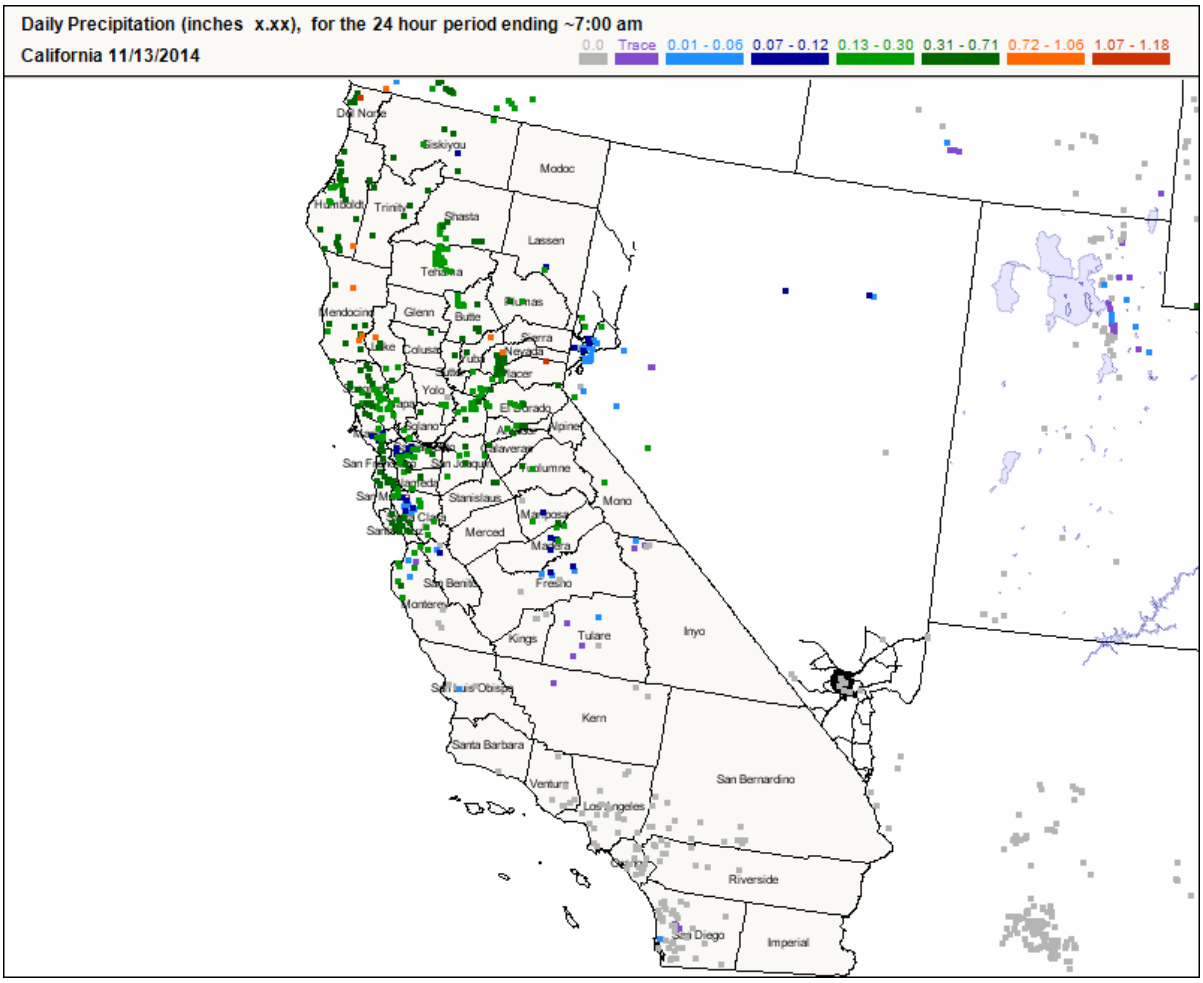
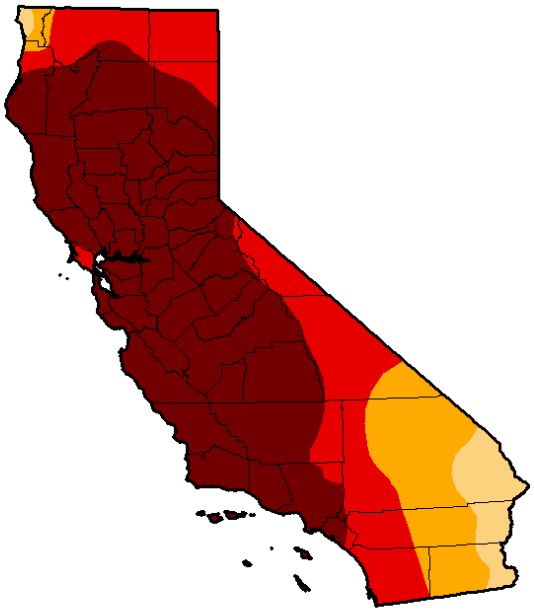
CoCoRaHS Map



United States Drought Monitor

U.S. Drought Monitor

California



October 28, 2014

(Released Thursday, Oct. 30, 2014)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	100.00	95.04	81.92	58.41
Last Week 10/21/2014	0.00	100.00	100.00	95.04	81.92	58.41
3 Months Ago 7/29/2014	0.00	100.00	100.00	100.00	81.89	58.41
Start of Calendar Year 12/31/2013	2.61	97.39	94.25	87.53	27.59	0.00
Start of Water Year 9/30/2014	0.00	100.00	100.00	95.04	81.92	58.41
One Year Ago 10/29/2013	2.66	97.34	95.98	84.12	11.36	0.00

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

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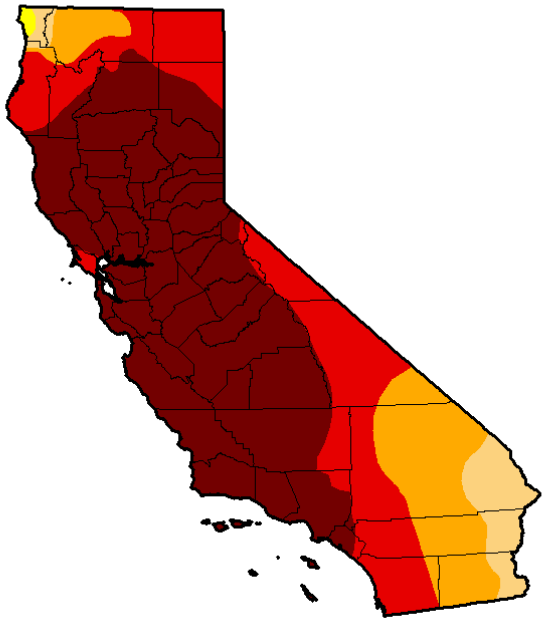
http://droughtmonitor.unl.edu/

U.S. Drought Monitor

California



November 25, 2014

(Released Wednesday, Nov. 26, 2014)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	99.72	94.42	79.69	55.08
Last Week 11/18/2014	0.00	100.00	99.72	94.42	79.69	55.08
3 Months Ago 9/26/2014	0.00	100.00	100.00	95.42	81.92	58.41
Start of Calendar Year 12/31/2013	2.61	97.39	94.25	87.53	27.59	0.00
Start of Water Year 9/30/2014	0.00	100.00	100.00	95.04	81.92	58.41
One Year Ago 11/26/2013	2.61	97.39	94.15	82.53	27.59	0.00

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

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